

National 4 Homework 14

Questions 1, 2, & 4 are Non Calculator

1. Given $a = -2$, $b = 7$, $c = -3$ calculate;

i) $2b - a$

ii) $10 - 2b$

iii) $3b + 2c$

iv) $a^2 + b^2 + c^2$

2. Multiply out and simplify;

a) $3(2a - 1) + 4(3a + 5)$

b) $5(3b - 2) - 2(7b + 1)$

c) $4(3x - 2) - 3(x + 1)$.

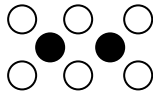
3. ABC Cabs charge a £1.40 starting price on their fare, plus 75p for every mile travelled.

a) Write down a formula to work out the fare (F) if you know the number of miles (M).

b) How much will it cost me to travel i) 3 miles and ii) 12 miles?



4. A pattern is created as shown.



a) Draw the next pattern

b) Copy and complete the table.

Black Dots (B)	1	2	3	4	5		11
White Dots (W)	4						

c) Write down a formula to calculate the number of white dots when you know the number of black dots.

d) A pattern has 48 white dots. How many black dots does it have?

5. Palm Gardeners use turf which costs £4.60 per m^2 .

a) How much will it cost them to turf this garden?

b) Palm Gardeners charge £6 per m^2 of turf plus £22.80 an hour for labour. If they start turfing the garden at 1000 and finish at 1530, how much will they charge for this job?

